User Manual

WIB2BX for PC/USB

CE

NAVTEX-receiver on 518kHz in English language and
on 490 kHz in national language
Barograph

This manual contains important information for correct using of this device.
Please read the manual carefully before start up.

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In spite of careful processing and programming a defect and/or complete failure of the WIB2BX can not be completely excluded. Due to atmospheric disturbances or to disturbances of other electrical and electronic devices, contents of messages can be falsified. The operators of the transmitting plants can change or stop the broadcasting service (temporarily or permanent).

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In this manual trademark, trade names, customer names, etc. are used. Even if these are not particularly characterized, the appropriate protection regulations are effective.

Note

Software updates for this product are available in the Internet:
http://www.weatherinfobox.com/english/Downloads.htm

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Scope of delivery

The following parts belong to the scope of delivery of the WIB2BX:

- 1 x WIB2BX,
- 1 x USB cable,
- 1 x CD with WIB2B software,
- 1 x User Manual.

Introduction

The WIB2BX is a dual frequency NAVTEX-receiver for the board PC. The device receives simultaneously NAVTEX-messages on medium wave frequencies 518 kHz (international, English) and on 490 kHz (national, national language).

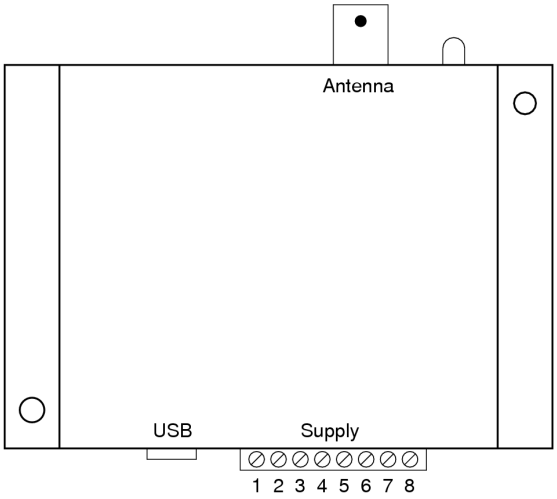
The WIB2BX equiped with an inserted precision air pressure sensor, is able to record the air pressure during a period of up to seven days.

The device will be connected to the PC via an USB interface. It is similar to an USB-memory-stick and appears as a new storage medium on the PC. This storage medium contains all received messages as well as all data of the air pressure sensor.

The device does not have any control elements. All functions will be activated by the PC.

Connections

The figure below shows the connection assignment of the WIB2BX:



The terminal for the supply voltage has following assignment:

Pin	assignment
1	reserved
2	reserved
3	reserved
4	antenna ground (optional)
5	Supply – (12...24V DC)
6	Supply + (12...24V DC)
7/8	If using an active antenna please connect pin 7 and pin 8.

The antenna socket (BNC, 50kΩ) can be connected with an active antenna (12V) or a passive antenna (e.g., isolated backstay with passiv-balun). If using an active antenna connect pin 7 and pin 8. An active antenna should be mounted very high (best of all in the mast's top). At using an passive antenna pin 7 und pin 8 must left open. In the delivery state of the device pin 7 and pin 8 are connected.

Beside the antenna terminal there is a light-emitting diode. The light-emitting diode turns on if the device is supplied with current.

For an easier connecting of the supply lines the supply terminal can be pulled out off the device. Optionally you can connect the terminal *antenna ground* with the grounding bar of the ship or boot to improve the reception. The line *antenna ground* is decoupled to the 12V(-) connection by an 100nF/50V capacitor in parallel with 100kΩ resistor.

When connecting the supply voltage please pay attention to the correct polarity. Protect the supply lines of the WIB2BX with time-lag 250mA fuse. The WIB2BX is protected internally with a resetable fuse element.

The WIB2BX can be integrated to the board connecting block. For receiving and saving messages in spite of the board network is switched off, the WIB2BX must be connected directly to the battery. Additionally the supply lines must be protected by a fuse directly at battery.

With the enclosed USB cable the connection of the WIB2BX (outlet USB) with PC/Notebook will be done.

The bulk of the USB jack as well as the connection 12V(-) are coupled with each other. Please note: you can get undesirable ground-loops between the USB connection and the PC. In such a case other electric devices can be parasetical connected with ground (or battery -). Devices needing much current could cause a damage in wiring or connected devices.

Software

The operation of the WIB2BX will be done by a comfortable Windows software. The software is working with the operating systems Windows 2000, XP and Vista, available in German, English and French version.

Software updates for the WIB2BX will be spread via internet. Nevertheless, please look form time to time at http://www.weatherinfobox.com, to make sure, you have the latest version.

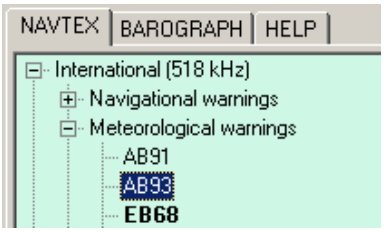
Software installation

The software of the WIB2BX is stored on the enclosed CD, which is part of the scope of delivery. In the folder *Deutsch* on the CD you will find the installation program for the German version. The folder *English* contains the installation program for the English version and the folder *Francais contains the* appropriate installation program for the French version.

In order to install the software please start the required installation program (Setup.exe) with a double click. Afterwards you have to follow the instructions shown on the screen.

After installation the WIB2BX is ready for operation. Please attach the device via USB cable to the PC, power up the WIB2BX and start the WIB2B program.

NAVTEX-Messages



In order to view NAVTEX-messages, please activate the tab NAVTEX. Here the NAVTEX menu structure is shown, in which the NAVTEX messages are sorted according to their message type.
For both used NAVTEX frequencies (490 kHz and 518 kHz) an own menu structure is availiable.

New messages are displayed in the menu tree in bold font. Messages which were already displayed once are shown in normal font. The entire menu structure can completely be opened with the button ⬍ and closed with the button ⧗.

All NAVTEX-messages will automatically be stored for two days and afterwards deleted. The transmission method for NAVTEX-messages (Sitor) permits a reduced recognition and correction of transfer errors. Characters, which were not received correctly, will be represented as underscore (_). Nevertheless it is possible that also normally represented characters are incorrect.

Structure of a NAVTEX message

The make up of a NAVTEX message is to be explained on the basis of following example:

```
ZCZC PA09
NETHERLANDS COASTGUARD
NAVIGATIONAL WARNING NR. 9 172128 UTC AUG
PLATFORM L10-G  53-29.4N 004-11.7E
UNLIT
NNNN
```

Each NAVTEX-message begins with the letters ZCZC, followed by the message identification (PA09). The first letter of the message identification serves the master station for identification. In this example it is NETHERLANDS COASTGUARD (P).

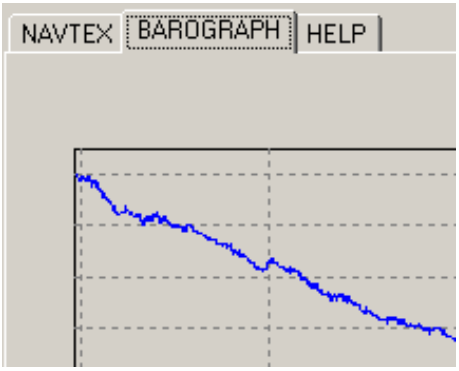
In the second letter the kind of message is coded, here navigational warning (navigation warnings). The last two numbers of the message identification (09) are a serial numbers. The number 00 has a privileged position. It is reserved for distress messages.

NAVTEX messages have a time stamp. It is shown at the end of the third line (172128 UTC August) and means: 17. August, 21:28 UTC. The time stamp refers to the date, the message was produced and not to the time of the radiant transmission. Afterwards the message content follows. The message ends with NNNN.

The following table contains an overview of the message types:

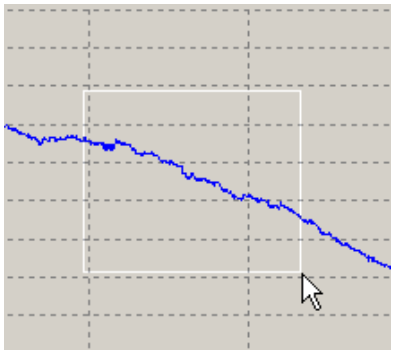
Code	Message type	Menu option
A	Navigational warnings	Navigational warnings
B	Meteorological warnings	Meteorological warnings
C	Ice reports	Ice reports
D	Search and rescue information	Search and rescue information
E	Meteorological forecasts	Meteorological forecasts
F	Pilot service messages	Pilot service messages
G	Information about DECCA navigational system	Electronic navaid messages
H	Information about LORAN navigational system	Electronic navaid messages
J	Information about GPS navigational system	Electronic navaid messages
K	Information about other navigational systems	Other messages
L	Additional navigational warnings (i.e. Ring moves)	Additional warnings
V	Other navigational warnings (i.e. ring list)	Remaining messages
W	Reserved for special service	Remaining messages
X	Reserved for special service	Remaining messages
Y	Reserved for special service	Remaining messages
Z	QRU (there are no messages)	Remaining messages

Barograph



The second tab contains the BAROGRAPH. The measuring data are represented in the diagram from left to right. I.e. the current measured value is on the right side of the curve. The barograph has a measuring interval of one minute and a resolution of 0,1hPa.

The representation period can be decreased with the Zoom-In-Button and increased with the Zoom-Out-Button . The temporal gradation is 12h, 24h, 48h and 7 days.



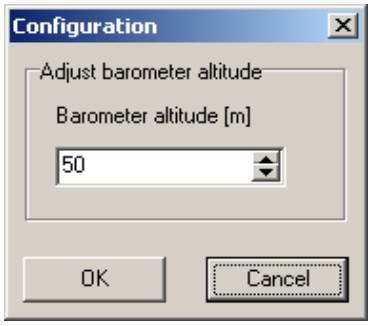
You can increase a cut out of the air pressure curve. Draw in addition a rectangular window with the mouse from above left to downward right. Use the left mouse button. If the mouse button is released, the appropriate range of the diagram will be shown increased.

The enlargement can be cancelled again by drawing any rectangular window with the mouse in reverse direction (from downside right to upward left).

The diagram is movable in any direction. Click in addition with the right mouse button into the air pressure curve and move the mouse. As long as you keep the mouse button pressed, the air pressure curve will follow the mouse movements.

The data of the barograph are only up to date, if a WIB2BX is attached to the computer. Then the curve is represented in blue colour. If the air pressure data are not up to date (no WIB2BX attached), the curve will be represented in black.

While the WIB2BX is attached to the PC, the current temperature, the air pressure and the three hours of air pressure tendency are indicated on top of the screen.



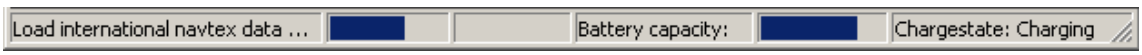
The air pressure sensor in the WIB2BX measures the absolute air pressure. Because air pressure is normaly referred to sea level, a too small measurement value is displayed without correction, if the device is above sea level.

To display the correct air pressure you have to set the barometre height in the configuration dialog. You reach the dialog about the menu *Settings->Configuration...*

Please note that all barograph data are deleted in the WIB2BX, if the device is switched off (is separated from power supply).

Status line

The status line is located at the lower edge of the WIB2B program window.
At this line information of the condition of the WIB2BX are indicated.



The following information are contained in the status line (from the left to the right):

- information of the data communication with progress bar,
- Information of new NAVTEX messages,
- status of battery (only WIB2B, the WIB2BX has no batteries),
- status of the WIB2BX.

Function overview

The following table gives an overview about the functions of the WIB2B program:

Menu option	Icon	Function
File->Open...		Opens an already stored message.
File->Save...		Stores a message.
File->Print...		Prints a message or a barograph curve.
File->Exit		Terminates the program.
Settings->Configuation		Opens the dialogue for adjustment of the barometre height.
Settings->Expand tree		Opens / unfolds the NAVTEX menu tree.
Settings->Collapse tree		Closes / folds the NAVTEX menu tree.
Settings->Zoom In		Increases the barograph view (only the time scale).
Settings->Zoom Out		Decreases the barograph view (only the time scale).
Help->Manual...		Opens the User Manual.
Help->System information...		Shows system information of the software and of the WIB2BX.

Operating instructions

Environment

Please use the equipment only in the interior in dry environment. Do not expose the equipment in use to temperatures higher than 60°C and lower than 0°C.

Hints to radio reception

Electromagnetic interferences can impair the receipt. This can occur due to e.g. computer, electronic navigation equipment, fluorescent lamps, inverters, battery chargers, generators, electric motors, high voltage transmission lines etc.
Therefore the equipment should be positioned as far away as possible from this equipment.The receipt can be impaired also by atmospheric disturbances (e.g. Thunderstorms).

Specifications

Receipt frequency	518 kHz and 490 kHz
PC interface	USB Full Speed, socket mini-B 5-pin
Supply voltage	12 - 24V
Current consumption	Approx. 20mA without active antenna
Antenna input	50 Ω, BNC
Supply active antenna	12V, max. 20mA
Measurement error of the temperature sensor	±1°C
Resolution of the air pressure sensor	0.1hPa
Absolute measurement error of the air pressure sensor	±1.5hPa
Typical long term stability of the air pressure sensor	-1hPa/year
Air pressure measuring interval	60s
Maximum recording span air pressure	7 days
Operating temmperature	0...60°C
Supported operating systems	Windows 2000, XP, Vista
Memory	762 KB flash memory
Dimensions (LxWxH)	Approx. 100mm x 66mm x 33mm
Weight	Approx. 90g without cable

For inside use only.

Warranty

If the WIB2BX exhibits a defect due to production or material defects within 24 months starting from the purchase date, it is either repaired by us or exchanged free of charge against appropriate equipment.
To wearing parts (e.g. housing, batteries, etc.) the warranty applies for six months starting from purchase date. The warranty does not apply, if the defect is caused on inappropriate treatment or neglection of the manuals.

A receipt of the warranty voucher with purchase date is required.

Devices with a crossed out dustbin label have to disposed in the European Union via a separate garbage collection at a suitable collective places for the recycling of electric and electronic devices.

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